

December 8, 1999

TO: Potential Respondents

FROM: Jim Gunn, Department of Retirement Systems  
RFP Coordinator

SUBJECT: Addendum #1: Responses to Questions from Vendor Pre-bid Conference  
RFP for Backfile Conversion

Enclosed is Addendum #1 to the RFP for Backfile Conversion. The addendum includes:

- Responses to written questions submitted
- Responses to questions asked at the vendor pre-bid conference held November 29, 1999
- A complete revision of Appendix D, Cost Worksheet

Also attached is a list of vendors who attended the pre-bid conference.

No other changes to the RFP, schedule or deadlines have been made. All questions or concerns regarding this RFP or Amendment must be addressed to:

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## Written Questions

1. Please define the long-term relationship between DoxSys, Inc. and the Vendor.
  - Will files created by the Vendor continue to reside on the Vendor's storage devices, or will they be re-indexed and converted to run on the equipment supplied by DoxSys?
  - Though it is a minimal task to relocate TIFF files from our system to the DoxSys System, who will be responsible to perform the final disposition of these files?

*Answer: There is no relationship intended between DoxSys and the backfile conversion Vendor; files (images and their associated indexes) created by the Vendor will be transmitted from the Fileroom to Point Plaza to run on DRS equipment. Vendor will be responsible for the transfer of files to Point Plaza. The DRS System Administrator will load transferred images and data into the production system.*
2. P. 19, para. 1.9 Will the final bids be closed or open (available for vendor review)

*Answer: Section 1.6.2 states that all bids, proposals or offers are public information, and, after award of contract, may be released in accordance with RCW 42.17, except items designated as "proprietary" as defined in 1.6.3. More information is contained in section 1.11, Records Retention.*
3. P. 23, para 2.1 We are concerned that significant costs can occur in the testing phase. What are the specification of the pre-test?
  - How many documents will be tested?
  - What type of documents will be tested?
  - Are the documents tested in addition to the 3,000,000 contained in the bid?

*Answer: The vendor will be required to verify the operational capabilities and data transmission/compatibility of their systems and procedures prior to beginning production backfile operations. A small but sufficient number of folders required to meet verification criteria will be backfiled in a "pre-test" of the system. The vendor will have input during contract negotiations in setting the "pre-test" scope and validation criteria for the "pre-test." Files used in the "pre-test" will be of production grade quality and characteristics, selected by agency staff. All files backfiled during the "pre-test" period are to be viewed as "setup verification" and will not be included in the required 3 million or more pages of production backfiling being contracted.*
4. P. 24, para. 2.5 Prior to transferring the files to the DoxSys system, is it correct to assume that no linkage is necessary between it and the Vendor's captured documents?

*Answer: For bidding purposes, no direct linkage with the system being developed by DoxSys is required. However, we do not want to eliminate "direct linkage" as an option.*

5. P. 25, para 3.1.1 Please denote the percentages (or quantities) for each physical characteristic that will impact scan rates – (size, color, fax, carbon copies, handwritten).

*Answer: More than 80% of documents are single or double sided standard 8 1/2 by 11 inch forms and printed documentation. The remainder is a mix of legal or smaller sized documents. A very small number of files contain onionskin or other low weight documents. A significant number of files have smaller off-sized ledger card weight documents. Handwriting is found on 70% or more of the documents, either as form input or as staff notations.*

6. P. 25, para. 3.1.1. Could you please quantify the term “most” when describing how many folders have bar code labels?

*Answer: All folders presented to the Vendor for processing will have bar code labels.*

7. P. 25, para 3.1.1 Because DRS has yet to decide on scanning all documents or not, is it correct to assume that you want a price for both.

*Answer: All documents presented to Vendor will be scanned. DRS will decide which folders are to be scanned, and will present those to Vendor as needed. Separate prices are not necessary.*

8. P. 26, para. 3.1.1 We would like more detail on the procedures for handling of folders between DRS and the Vendor when the files are scheduled to be scanned.

*Answer: DRS staff will select the folders to be imaged and present them to the Vendor. When finished, Vendor will replace loose pages within the folder, and place folders in a box. When full, the boxes will be given to DRS staff to store. (It is not necessary to return pages in any special order, or to replace pages on prongs in folders).*

*An “on-demand” list of between 300 and 500 folders will be compiled daily; DRS will select the folders and present them to Vendor for immediate processing. When Vendor completes “on-demand” folders for the day, Vendor will resume normal conversion processing. “Hot files” are the same as “on-demand” folders, but the need for them may occur at any time, and generally consists of one or two folders. Quantity of “hot files” is expected to be less than 1 per week.*

9. P. 27, para 3.1.8 Is it possible to obtain remote access to the mainframe (via CRT, remote print or other informational access method) to verify indexes kept by that system?

*Answer: Yes*

10. P. 28, para 3.1.12 Is it correct to assume the current DoxSys hardware does not have enough availability to perform the Backfile Conversion, and additional hardware will be required for this task? Is it also correct to assume that there is sufficient, hardware and storage to operate both sets of information (DoxSys and

the Vendor's final conversion) on the current DoxSys hardware once the project is completed?

*Answer: The production system being provided by DoxSys is for ongoing (newly received documents) production. It has more than enough capacity to hold backfiled documents in addition to new business. As stated in the RFP, the selected backfile vendor will provide and dispose of all equipment and software used by their staff during the backfile.*

11. P. 50, para RCW 40.14.050 Is it correct to assume that travel expenses for quarterly reviews are not required to be included in this bid?

*Answer: There is no requirement in the RFP for the Vendor to attend the meetings referenced in this RCW, therefore, no travel expenses would be expected.*

12. P. 58, para RWAC 434-663-480 What is the planned disposition of the Vendor's equipment at the conclusion of this project? Is leased equipment acceptable if it is removed at the conclusion of the project?

*Answer: Any equipment, hardware or software necessary for the Vendor to complete the conversion is supplied by the Vendor at their own cost. That equipment remains the possession of the Vendor, and is to be removed by the Vendor at the conclusion of the contract period.*

13. P. 9, para 20.1.2 If the Vendor is providing all services, what is the nature of the requested training? Is it not correct that all new documents added to the system will be done through the DoxSys system, utilizing DRS staff?

*Answer: It is correct that all new documents are added to the system via the DoxSys system. This provision refers to any training the Vendor may require DRS staff to attend as part of "backfile operations." If there is none, the provision will be removed from the contract.*

14. P. 24, para 66 Is it correct to assume that this clause (insurance) only applies to those employees directly assigned to the project?

*Answer: Yes*

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15. Is 3 million still a good number for your volume?

*Answer: 3 million pages is what DRS estimates would be the minimum backfile effort necessary and a volume we could complete within our budget estimate. We may be able to image more documents, depending on the costs. We have more than 9 million pages in folders, many of which will not need to be backfiled.*

16. What kind of volume flow can be guaranteed for on going scanning?

*Answer: We are creating work processes designed to supply the Vendor adequate documents for scanning. We will work with the Vendor to streamline processes and meet Vendor's volume needs, with processes tailored to best meet the approach proposed by the successful vendor.*

17. Clarify your intent on color scanning.  
*Answer: Vendors are asked to provide a separate cost for color and for black and white scanning. DRS will decide if the backfile conversion will be color or black and white on the basis of submitted cost proposals.*
18. What is the budget for this project?  
*Answer: Adequate funds have been allocated to complete the project.*
19. Could you comment on paper quality and document quality.  
*Answer: Files may include but are not limited to the following: thermal paper, copies made from microfilm/fiche, reverse print copies, pencil, various color of inks, colored paper, NCR paper, etc. The paper quality varies depending on the age of the document, but most are in very good condition. Refer to Page 23 of RFP for more information.*
20. Do the files include slides?  
*Answer: No*
21. Page 23 mentions electronic files. Is there a volume?  
*Answer: No electronic files will be included as part of the backfile conversion.*
22. Where did the methodology for the timeframe come from?  
*Answer: Start time for the conversion effort is dictated by the implementation of Basic Agency-Wide Imaging via the DoxSys system; backfile conversion supports that implementation. End date for the contract is dictated by budget cycles; 6/30/2001 being the end of our fiscal biennial period.*
23. How much physical space is there at the site?  
*Answer: Inside dimensions of the facility are 73' X 68'. Office area inside dimensions are 46' X 15' (usable space in the office is somewhat less than indicated due to the sprinkler valve "tree" that occurs in the front corner and cannot be blocked; usable space is approximately 36' X 15'). Additional usable space (approximately 12' X 30') is available outside the office area, between the office and the file shelving; another area available is at the far end of the building opposite the office measuring approximately 9' X 25'. There are two roll up doors and loading docks. Parking for approximately 12 vehicles is available on site, with street parking also available.*
24. How many pages per document type, average?  
*Answer: Form documents are usually single page. Pages per document varies widely for other documents and can in rare cases move past 100 pages. The statistical average available indicates less than 4 pages per document overall.*

25. Is re-preping folders required? Does it include replacing documents in their original folders? Does it include replacing documents on prongs in the folder, or replacing documents in original order?  
*Answer: After processing, documents are to be replaced in their original folders. We do not require them to be in their original order, nor replaced on their prongs.*
26. Will you destroy the paper?  
*Answer: That has not been determined yet.*
27. Can you clarify the check in, check out and purge process?  
*Answer: Folders and documents will be purged by DRS staff before they are turned over to Vendor for scanning. Vendor will not be required to purge any documents.*  
  
*The check in and check out process required of the vendor will be negotiated. We believe this effort can be minimal and current system capabilities may allow most if not all of these steps to be performed electronically.*
28. Do you currently use a records management system for check in check out?  
*Answer: Yes*
29. Will DRS provide an ASCII data file with all indexes? Will indexing be member folder or documents within the folder?  
*Answer: Electronic access to the mainframe system for account verification and indexing will be available to the vendor. If necessary, DRS will provide the vendor with an ASCII data file for index verification. Either method will provide account verification and the majority of key index fields but not all index fields. Sub-foldering and document type identification will need to occur through capture software, prepping header sheets or keying to complete required indexing.*
30. Will Vendor be responsible for removing files from shelves and replacing them?  
*Answer: No, DRS staff will pull files from shelves. Vendor staff will place files into boxes after processing is complete.*
31. Is the requirement for recognition software capable of identifying forms by document characteristics an indexing value?  
*Answer: Electronic recognition of form types through recognition software would greatly reduce the vendor staff indexing workload and speed operations. The high volume of forms with specific characteristics being backfiled together with not needing OCR of data content for indexing makes recognition software appear to be a reasonable solution.*

32. Is a PDF format image with a text file required for full text search? How will those documents be identified?  
*Answer: Documents requiring full text OCR processing will be identified by type to the vendor. Documents are intermingled in the folder when present. Very few folders contain documents requiring full text processing. Captured text data will be stored in an MS SQL database in ASCII text format for later access by PC DOCS' DOCSFulcrum software.*
33. Are vendors to provide all necessary hardware and software to complete the job?  
*Answer: Yes. DRS does not intend to purchase equipment or software for the conversion.*
34. Is it mandatory that the job be done on site? Can indexing be done off-site?  
*Answer: All aspects of the conversion must be performed on site.*
35. What is the methodology to get the information from the conversion system to the DoxSys system?  
*Answer: See ATTACHMENT A – DOXSYS SYSTEM IMPORT REQUIREMENTS*
36. Clarify section 23.1 of the sample contract. What equipment is this referring to?  
*Answer: This refers to any equipment DRS may decide to purchase from the Vendor. Any such equipment the Vendor proposes must be a separate line item in the cost section of the Vendor's proposal.*
37. What relationship would this contract have with the DoxSys system? Will DoxSys have oversight of this?  
*Answer: There is no relationship between the conversion contract and the DoxSys contraction. DoxSys will not have oversight responsibility for this conversion.*
38. Will DoxSys populate the data base?  
*Answer: The DRS Viewstar System Administrator will populate the database.*
39. Are you looking for 100% quality?  
*Answer: Yes*
40. What percent quality is acceptable for OCR?  
*Answer: The industry standard, which is 95% single pass.*
41. Does the Vendor need to be bonded?  
*Answer: No*

42. Will space at the site be provided at no charge to the Vendor for the entire length of the project?

*Answer: Yes*

43. Is the space furnished with work stations?

*Answer: No. However, there are currently desks in the space. The Vendor may use them if they wish. No other furniture or equipment will be provided by DRS.*

44. Are there any computers currently in the space?

*Answer: Yes. DRS staff are currently using PCs in that space. No PCs will be provided as part of this contract. Vendor is responsible for providing all hardware and software required to fulfill terms of the contract.*

45. Is there any wiring in the space?

*Answer: The office space contains LAN communications wiring, telephone wiring and electrical wiring.*

46. How does the Vendor get paid?

*Answer: DRS will pay by Deliverable. Upon receipt of a signed-off Deliverable, and an invoice, payment will be made by state warrant. A Deliverable Payment Schedule will be developed during contract negotiations.*



## RFP QUESTIONS AND ANSWERS

### ATTACHMENT A – DOXSYS SYSTEM IMPORT REQUIREMENTS

#### CCITT Group III/IV Image File Imports

This section defines the requirements for importing image files scanned by external systems or vendors into the ViewStar System. It describes the required structure of the image files known as VS-CCITT files and the control files you use to import them, including how files representing individual documents must be organized to facilitate import.

#### VS-CCITT Image File Requirements

The ViewStar System supports CCITT Group III (1D or 2D) and Group IV (non-tiled) compression. Each image file must have a Version 4.2 TIFF (Tag Image File Format) header as defined in AppendixC, *CCITT TIFF Headers*. While the ViewStar System can view Group III files with 1D compression, 2D compression is recommended and preferred.

#### VS-CCITT File Names and Directory Organization

Each page of a ViewStar document is represented by a single image file. These files are typically given a numeric filename and a file extension of .IMG. For example, a five-page ViewStar document should contain image files named 1.IMG, 2.IMG, 3.IMG, 4.IMG, and 5.IMG.

Similar documents should be grouped into a batch that is defined by a control file as described in *VS-CCITT Control File Requirements* on pageB–14. All image files for a specific batch must be sequentially numbered and have a file type of .IMG. They can be contained in the same network subdirectory as the corresponding control file, or they can be located in a different directory as long as that directory is specified in the control file. Multiple control files and their corresponding images can reside in a common subdirectory as long as the control and image filenames are unique.

#### 1. VS-CCITT Control File Requirements

The VS-CCITT import process is driven by control files that contain references to a number of similar documents. Each control file represents a batch of documents that are imported by a single process and treated in a similar manner. The number of documents in a single control file is not specifically limited but should be held to a number that is manageable from an administrative perspective, such as 100 to 200 documents.

The first two lines of a VS-CCITT control file contain data that applies to all documents in the batch, followed by one line of specific data for each document. Specifically, the control file must have the format (including spaces, double quotes and parentheses) shown below:

```
(:INDEX "Index")  
(:ATT_LAB ("AttrName_1" "AttrName_2" ..... "AttrName_n"))  
(:DIR "Path")  
(:DOC ( ( n n n n n n n n n) ("AttrData1" "AttrData2" ..... "AttrData3")))  
(:DOC ( ( n n n n n n n n n) ("AttrData1" "AttrData2" ..... "AttrData3")))
```

```
(:DOC ( ( n n n n n n n n n) ("AttrData1" "AttrData2" ..... "AttrData3")))  
(:DOC ( ( n n n n n n n n n) ("AttrData1" "AttrData2" ..... "AttrData3")))  
(:DOC ( ( n n n n n n n n n) ("AttrData1" "AttrData2" ..... "AttrData3")))  
(:DOC ( ( n n n n n n n n n) ("AttrData1" "AttrData2" ..... "AttrData3")))  
(:DOC ( ( n n n n n n n n n) ("AttrData1" "AttrData2" ..... "AttrData3")))
```

The components of the control file are described below:

*Index* A string specifying the target index within the ViewStar database for all the documents listed in the control file. This line must contain, as a minimum, the null string of ""; a default of TOP is used if a specific index name is not supplied.

*AttrName\_n* Each *AttrName* is a string specifying the fields defined in the ViewStar index named in the first line. All attributes for the target index must be included. If no index name is specified in the first line of the control file, this line must at least include a null string enclosed in parentheses ("").

*Path* The path of the directory containing the associated image files. The path must be separated and end with double back-slashes, for example, "F:\\EXAMPLE\\".

*(n n n n)* A list of integers representing the filenames of the image files that make up a document. Use of leading zeroes in the integer file names (i.e., 0001, 0002, etc.) is not supported. The image files are assumed to reside in the same network directory as the control file.

The first element in the list represents page 1 of the document, the second element in the list represents page 2 of the document, and so on.

*AttrData\_n* Each *AttrData* is a string containing the attribute data for the corresponding field defined by the "*AttrName\_n*" entries in the second line of the control file. This element of the :DOC list must at least include a null string enclosed in parentheses (""). If attribute names are defined on line 2 of the control file, corresponding attribute data for each attribute name must be included on these lines. If no attribute data is defined for a particular attribute, a null string "" must be inserted in the proper position. Matching the attribute data to the attribute names is done on a positional basis.

#### 1.1. NOTE:

Do not use the extension ".CNT" for the control files for the CCITT format as the *importation process generates a temporary file with this extension.*

##### 1.1.1. C

##### 1.1.1.1. Headers

This appendix provides a technical specification of the image headers required for VS-CCITT image files. It is divided into two sections, one on Group III and one on Group IV CCITT files. These files are often used by ViewStar customers for backfile conversion. Service bureaus preparing VS-CCITT files for import into the ViewStar System should be aware of the specifications in this appendix. The ViewStar System uses Version 4.2 TIFF (Tag Image File Format) headers on all CCITT Group III and IV image files. TIFF is a standard used by many scanners, desktop publishers, paint programs, and cameras. The TIFF header supersedes all previously used ViewStar file headers.

The byte ordering follows the Intel Style (least significant byte followed by most significant byte). The header is 184 bytes long and uses 12 Standard TIFF Tags. In

addition, ViewStar uses 10 private bytes of data to store the ViewStar identifier, the k factor of the Group III file, and the 4-byte creation-time value obtained from DOS. ViewStar currently supports only one image per file. The assumed data orientation is that the first row of the bitmap is the visual top of the image, and the first column of the bitmap is the visual left side of the image.

The minimum size of each tag is 12 bytes; of this, the first two bytes are the tag identifier, the next two are the data type (1=Byte, 2=ASCII, 3=Short, 4=Long, 5=Rational), then a 4-byte integer describing the length of the data, and finally, 4 bytes of data. If the data is longer than four bytes, the data bytes are used as a pointer to a file location where the data is stored. The ViewStar private data and resolution information are the only cases where the tag information exceeds the *minimum 12 bytes*.

Group III TIFF Headers

## **2. Specific Data**

### **3. Initial File Information**

Byte 0 'I','I', /\* Intel Style, as opposed to Motorola \*/

Byte 2 42,0, /\* TIFF Version Number — 4.2 \*/

Byte 4 8,0,0,0, /\* Tag Start Position \*/

Byte 8 12,0, /\* Number of Tags \*/

### **4. Tag Data**

Tag data starts at byte 10 in the file. Information is supplied below on allowable values for specific tags, which are the only ones recognized by ViewStar's CCITT Group III image format. Tags other than the ones specified here are ignored.

### **5. Subfile Information**

Tag: 255 (FFH)

Data type: Short

Number of distinct values: 1

This tag is used as an overall description of the data:

1 = Image is full resolution (ViewStar default)

2 = Image is of reduced resolution

3 = A single page of a multipage image

### **6. Image Width**

Tag: 256 (100H)

Data type: Unsigned Short

Number of distinct values: 1

Width of the image in pixels. The width is assumed to be in the X direction (*horizontal axis*).

### **7. Image Length**

Tag: 257 (101H)

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Data type: Unsigned Short

Number of distinct values: 1

Length of the image in pixels. The length is assumed to be in the Y direction (vertical axis).

## **8. Compression Style**

Tag: 259 (103H)

Data type: Short

Number of distinct values: 1

This tag describes the compression format used in the file. Of the four possible types, only one is supported by ViewStar Group III files:

3 = Facsimile-compatible CCITT Group III. Each strip begins on a byte boundary.

Terminating characters are used with this scheme so that FAX communication is possible. Rows need not be byte-boundary aligned.

## **9. Fill Order**

Tag: 266 (10AH)

Data type: Short

Number of distinct values: 1

This tag describes the fill order. There are two possible values and ViewStar supports both:

1 = As pixels are placed into a byte, they are ordered from left to right (from most significant to least significant)

2 = As pixels are placed into a byte, they are ordered from right to left (from the least significant to the most significant)

The ViewStar default is type 2.

## **10. Data Offset**

Tag: 273 (111H)

Data type: Long

Number of distinct values: 1

*This is a file offset pointer to the start of the compressed image data.*

## **11. Strip Bytes**

Tag: 279 (117H)

Data type: Long

Number of distinct values: 1

The strip byte count contains the length in bytes of the data, exclusive of the header.

## **12. X Resolution**

Tag: 282 (11AH)

Data type: Rational

Number of distinct values: 1

This tag is for the X-resolution, the number of pixels per Resolution Unit in the X direction (horizontal axis). ViewStar assumes the TIFF default measurement units are inches.

Rational information is stored as two long integers, the first number being the numerator and the second the denominator of the fraction. For example, 200 DPI would use a numerator of 200 and a denominator of 1. The tag contains a pointer to the two longs at file position 168.

### **13. Y Resolution**

Tag: 283 (11BH)

Data type: Rational

Number of distinct values: 1

This tag is for the Y-resolution, the number of pixels per Resolution Unit in the Y direction (vertical axis). ViewStar assumes the TIFF default measurement units are inches.

Rational information is stored as two long integers, the first number being the numerator and the second the denominator of the fraction. For example, 200 DPI would use a numerator of 200 and a denominator of 1.

*The tag contains a pointer to the two longs at file position 176.*

### **14. Free Offsets**

Tag: 288 (120H)

Data type: Long

Number of distinct values: As many as there are contiguous blocks of unallocated space in the TIFF file The Free Offsets tag is a pointer to a group of pointers. Each of these pointers points to an available free contiguous area of space in the TIFF file. If there is only one free area of space, there only needs to be one pointer. ViewStar private data is stored using this tag and the Free Byte Count tag. There is only one Free Offset block of 10 contiguous bytes used in the standard ViewStar file.

### **15. Free Byte Count**

Tag: 289 (121H)

Data type: Long

Number of distinct values: As many as there are contiguous blocks of unallocated space in the TIFF file The Free Byte Count tag is a pointer to an array containing the lengths of the free offset blocks. If there is only one free offset block, the Free Byte Count tag is the length of the free offset block.

ViewStar private data is stored using this tag and the Free Offsets tag. There is only one block of 10 contiguous bytes used in the standard ViewStar file.

### **16. Group 3 Options**

Tag: 292 (124H)

Data type: Long

Number of distinct values: 1

Group 3 options is a tag used by ViewStar only with Group III files. The Group 3 Options tag contains 32 possible flag bits. All unused bits are set to 0. Bit 0 is the low-order bit. The default is 0.

Bit 0 = Set to 0 for 1D compression, or to 1 for 2D compression

Bit 1 = Set if uncompressed mode on CCITT is used

Bit 2 = Set if fill bits have been used before EOL codes to pad to a byte boundary

The ViewStar default is 0. This tag is included because many of ViewStar files use *fill bits, particularly raw files obtained directly from a FAX machine.*

## 17. ViewStar Private Data

This starts at file offset 158 in the file and contains the following 10 bytes:

'v' 's' = The ViewStar private space identifier

k factor = A long integer which contains the k factor for Group III files (1-D files use a k factor of 0)

time = A long integer specifying the DOS file-creation time

## 18. Group III TIFF Header Byte Structure

The skeleton structure used by the ViewStar software to create the Group III TIFF image file header is given below. Not all of the data in the structure is known initially; image width, length, resolution, and so on are filled in at the time of creation.

ViewStar image data usually starts at byte 184 of the file, however, you can put additional tags into the header provided the correct offset is given in the Data Offset tag.

### 18.1. NOTE:

This skeleton file structure is an example based on default values. All of the tags below must be present in your files. There could be additional tags present. Also, the data in your files will be different.

```
# define DATA_START 184
static UCHAR tiff[196] = {
/* byte position */
/* 0 / 'I','I', / Intel Style */
/* 2 / 42, 0, / TIFF Version Number */
/* 4 / 8,0,0,0, / Tag Start Position */
/* 8 / 12,0, / Number of Tags */
/* The Tags */
/*Tag*/ /*Type*/ /*Length*/ /*Data*/
/* 10 / 255,0,3,0,1,0,0,0,1,0,0,0, / SubFile */
/* 22 / 0,1,3,0,1,0,0,0,0,0,0,0, / Image Width */
/* 34 / 1,1,3,0,1,0,0,0,0,0,0,0, / Image Length */
/* 46 / 3,1,3,0,1,0,0,0,3,0,0,0, / Fax CCITT Gr 3/4 */
/* 58 / 10,1,3,0,1,0,0,0,2,0,0,0, / Fill Order */
/* 70 / 17,1,4,0,1,0,0,0, DATA_START,0,0,0, / Data Offset */
/* 82 / 23,1,4,0,1,0,0,0,0,0,0,0, / Strip Bytes */
/* 94 / 26,1,5,0,1,0,0,0,168,0,0,0, / X resolution */
/* 106 / 27,1,5,0,1,0,0,0,176,0,0,0, / Y resolution */
/* 118 / 32,1,4,0,1,0,0,0,158,0,0,0, / Free Offsets */
```

```
/* 130 / 33,1,4,0,1,0,0,0,10,0,0,0, / Free Byte Count */  
/* 142 / 36,1,4,0,1,0,0,0, 1,0,0,0, / Group III Options */  
/* 154 / 0,0,0,0, / End of Directory */  
/* 158 / 'v','s', / vs stamp */  
/* 160 / 0,0,0,0, / k factor */  
/* 164 / 0,0,0,0, / creation time */  
/* 168 / 0,0,0,0,1,0,0,0, / X resolution */  
/* 176 / 0,0,0,0,1,0,0,0, / Y resolution */  
/* 184 */};
```

Group IV TIFF Headers

## 19. Specific Data

### 20. Initial File Information

Bytes 0-1 'I','I',/\* Intel Style, as opposed to Motorola\*/  
Bytes 2-3 42,0,/\* TIFF Version Number — 4.2\*/  
Bytes 4-7 8,0,0,0,/\* Tag Start Position\*/  
Bytes 8-9 12,0,/\* Number of Tags\*/

### 21. Tag Data

Tag data starts at byte 10 in the file. Information is supplied below on allowable values for specific tags, which are the only ones recognized by ViewStar's CCITT Group IV image format. Tags other than the ones specified here are ignored.

### 22. Subfile Information

Tag: 255 (FF hex)  
Data type: Short  
Number of distinct values: 1  
This tag is used as an overall description of the data:  
1 = Image is full resolution (ViewStar Default)  
2 = Image is of reduced resolution  
3 = A single page of a multipage image (ViewStar does not support this)

### 23. Image Width

Tag: 256 (100 hex)  
Data type: Short or Long  
Number of distinct values: 1  
Width of the image in pixels. The width is assumed to be in the X direction (*horizontal axis*).

### 24. Image Length

Tag: 257 (101 hex)  
Data type: Short or Long

Number of Distinct Values: 1

Length of the image in pixels. The length is assumed to be in the Y direction (vertical axis).

## **25. Compression Style**

Tag: 259 (103 hex)

Data type: Short

Number of distinct values: 1

This tag describes the compression format used in the file. Of the four possible types, only one is supported in ViewStar Group IV files:

4 = Facsimile-compatible CCITT Group IV. This was not supported by the ViewStar 2.3.X release but is supported in release 3.0.1 and above.

## **26. Fill Order**

Tag: 266 (10A hex)

Data type: Short

Number of distinct values: 1

This tag describes the fill order. There are two possible values and ViewStar supports both:

1 = As pixels are placed into a byte, they are ordered from left to right (from most significant to least significant)

2 = As pixels are placed into a byte, they are ordered from right to left (from the least significant to the most significant)

The ViewStar default is type 2.

## **27. Data (Strip) Offset**

Tag: 273 (111 hex)

Data type: Short or Long

Number of distinct values: 1

This is a file offset pointer to the start of the compressed image data. ViewStar *allows only one strip per image*.

## **28. Rows Per Strip**

Tag: 278 (116 hex)

Data type: Short or Long

Number of distinct values: 1

The rows per strip value should be the same as the length (height) of the image.

ViewStar does not support more than one strip per image.

## **29. Strip Bytes**

Tag: 279 (117 hex)

Data type: Short or Long

Number of distinct values: 1



The strip byte count contains the length in bytes of each strip in the image. Since ViewStar only supports one strip per image, this will be the length of the entire image data, exclusive of the header.

### **30. X Resolution**

Tag: 282 (11A hex)

Data type: Rational

Number of distinct values: 1

This tag is for the X-resolution, the number of pixels per Resolution Unit in the X direction (horizontal axis). ViewStar assumes the TIFF default measurement units are inches.

Rational information is stored as two long integers, the first number being the numerator and the second the denominator of the fraction. For example, 200 DPI would use a numerator of 200 and a denominator of 1. The tag usually contains a pointer to the two longs at file position 158.

### **31. Y Resolution**

Tag: 283 (11B hex)

Data type: Rational

Number of distinct values: 1

This tag is for the Y-resolution, the number of pixels per Resolution Unit in the Y direction (vertical axis). ViewStar assumes the TIFF default measurement units are *inches*.

Rational information is stored as two long integers, the first number being the numerator and the second the denominator of the fraction. For example, 200 DPI would use a numerator of 200 and a denominator of 1. The tag usually contains a pointer to the two longs at file position 166.

### **32. Free Offsets**

Tag: 288 (120 hex)

Data type: Long

Number of distinct values: 1

The free offsets tag is a pointer to a group of pointers. Each of these pointers point to an available free contiguous area of space in the TIFF file. If there is only one free area of space, there only needs to be one pointer. ViewStar private data is stored using this tag and the Free Byte Count tag. There is only one Free Offset block of 10 contiguous bytes allowed in a ViewStar file.

### **33. Free Byte Count**

Tag: 289 (121 hex)

Data type: Long

Number of distinct values: 1

The Free Byte Count tag is a pointer to an array containing the lengths of the free offset blocks. If there is only one free offset block then the Free Byte Count tag is the length of the free offset block.

ViewStar private data is stored using this tag and the Free Offsets tag. There is only one block of 10 contiguous bytes allowed in the standard ViewStar file.

### 34. ViewStar Private Data

This usually starts at file offset 174 in the file and contains the following 10 bytes:  
'v' 's' = The ViewStar Private space identifier. This must be lower case. k factor = A long value which contains the k factor for Group III files. This should be set to zero (0) for a Group IV file.

*time = A long value containing the DOS file-creation time.*

### 35. Group IV TIFF Header Byte Structure

The skeleton structure used by the ViewStar software to create the TIFF image file header is given below. Not all of the data in the structure is known initially (such as the image width, length, resolution, and so on). It is filled in at the time of creation.

ViewStar image data usually starts at byte 184 of the file. However it is possible to put additional tags into the header provided the correct offset is given in the Data Offset tag.

#### 35.1. NOTE:

This skeleton file structure is an example based on default values. There could be additional tags present. Also, the data in your files will be different.

```
static UCHAR tiff[ 196 ] = {  
/* Byte position Value Comment  
*/  
/* 0 / 'I','I', / Intel Style */  
/* 2 / 42, 0, / TIFF Version */  
/* 4 / 8,0,0,0, / Tag Start Position */  
/* 8 / 12,0, / Number of Tags */  
/* The Tags: Tag Type Length Data Comment */  
/* 10 / 255,0, 3,0, 1,0,0,0, 1,0,0,0, / SubFile */  
/* 22 / 0,1, 3,0, 1,0,0,0, 0,0,0,0, / Image Width */  
/* 34 / 1,1, 3,0, 1,0,0,0, 0,0,0,0, / Image Length */  
/* 46 / 3,1, 3,0, 1,0,0,0, 4,0,0,0, / Fax CCITT Gr III/IV */  
/* 58 / 10,1, 3,0, 1,0,0,0, 2,0,0,0, / Fill Order */  
/* 70 / 17,1, 4,0, 1,0,0,0, 184,0,0,0, / Data Offset */  
/* 82 / 23,1, 4,0, 1,0,0,0, 0,0,0,0, / Rows Per Strip */  
/* 94 / 23,1, 4,0, 1,0,0,0, 0,0,0,0, / Strip Bytes */  
/* 106 / 26,1, 5,0, 1,0,0,0, 158,0,0,0, / X resolution */  
/* 118 / 27,1, 5,0, 1,0,0,0, 166,0,0,0, / Y resolution */  
/* 130 / 32,1, 4,0, 1,0,0,0, 174,0,0,0, / Free Offsets */  
/* 142 / 33,1, 4,0, 1,0,0,0, 10,0,0,0, / Free Byte Count */  
/* 154 / 0,0,0,0, / End of Directory */  
/* 158 / 0,0,0,0, 1,0,0,0, / X resolution */  
/* 166 / 0,0,0,0, 1,0,0,0, / Y resolution */  
/* 174 / 'v','s', / vs stamp */  
/* 176 / 0,0,0,0, / k factor */  
/* 180 / 0,0,0,0, / creation time */
```

/\* 184 \*/};

**APPENDIX D  
COST WORKSHEETS**

*The following Cost Worksheets shall be completed. Under Software, provide a **complete** list of all software proposed for this project, including licenses, data server OS, applications, communication links, etc. Under Hardware, provide a **complete** list of all hardware to be used on this project, including any workstations, servers, scanners, printers, etc. Under Professional Services, provide a **complete** list of all professional services associated with this contract, including project management, training, personnel, etc. Any other costs, including any equipment Vendor proposes DRS should purchase, are to be identified under "Other".*

**NOTE:** *Provide one worksheet/cost for color scanning, and one worksheet/cost for black and white scanning. A third worksheet/cost is required for the cost of fulltext search capture of a minimum of 100,000 pages.*

<b>COLOR SCANNING</b>			
Item	Product Identification	Quantity to be Provided	Cost
• Software			
• Hardware			
• Professional Services			
• Other			
<b>COST PER PAGE TO PROVIDE COLOR SCANNING: \$_____</b>			

<b>BLACK AND WHITE SCANNING</b>			
Item	Product Identification	Quantity	Cost
• Software			
• Hardware			
• Professional Services			
• Other			
<b>COST PER PAGE TO PROVIDE BLACK AND WHITE SCANNING: \$_____</b>			

<b>Fulltext Search Capture</b>			
Item	Product Identification	Quantity	Cost
• Software			
• Hardware			
• Professional Services			
• Other			
<b>COST PER PAGE TO PROVIDE FULLTEXT SEARCH CAPTURE: \$_____</b>			

## Backfile Conversion Pre-bid Conference 11/29/99

### Attendance List

1. Northwest Center
2. Scan One
3. FYI Image
4. Optitik, Inc
5. Image Processing Systems, Inc
6. ACS
7. St. Vincent dePaul
8. SDQ Software
9. Production West Imaging
10. Morningside